

Siting Criteria Definitions

A. Land Availability

1. Number of Acres. A site must include sufficient land for construction of the proposed facilities in order for it to be considered. A range of 10 to 50 acres has been established for a Holding Basin or Peak Flow Facility Site. A range of 50 to 140 acres has been established for a Wastewater Treatment Facility Site. The more acres the site contains the more buffer zone available on the site. The greater the buffer zone the easier it is to reduce impacts off-site. Sites with more acreage will receive a higher ranking.
2. Land Use and Zoning. Sites located in an industrial area or sites buffered from view from residential areas by adjacent industrial areas, railroad corridors, or natural features will be rated high in this criteria. The costs of mitigating for noise, lights, and visual aesthetics would likely be less for this type of site. Vacant industrial or commercial sites are considered the highest desirable lands.
3. Surrounding Land Use. The effects of a WWTF on adjacent property values and the compatibility with activities on neighboring properties. Sites that are in an industrial neighborhood are considered the most compatible and will receive a higher ranking.
4. Land Value. This criteria considers the probable land costs of the sites. Any number of features can impact the probable cost of the site. Lower cost sites will receive a higher ranking. Properties listed for sale on the real estate market are considered willing sellers and will receive a higher ranking.

B. Site Accessibility

1. Transportation. This addresses the ease of access to the site, type of roads, railroad access, distance to a freeway from the site, and number of alternative routes that are available. Ability to provide access from major arterials and site driveways that reduce impacts to the neighbors will also be considered. Truck traffic may be entering and leaving the facility during and after construction. Sites with good access will receive a higher ranking.
2. Proximity to Salt Creek. Sites close to the plant discharge outfall at Salt Creek that have potential to gravity flow to the outfall will receive a higher ranking. Close proximity to Salt Creek minimizes the length of the plant outfall sewer.
3. Access to Salt Valley Trunk Sewer. Sites that have close or easy access to the Salt Valley Trunk Sewer minimize the length of connection piping between the facility and the trunk sewer and will receive a higher ranking.

4. Utilities. The location of the site with regard to existing infrastructure including electrical power, gas, potable water, and sewer. A site with minimal distance from two electrical substations would receive a higher ranking. A site with the shortest distance to the nearest 6-inch high pressure gas supply line would receive a higher ranking. Minimal distance to a reliable source of potable water will receive a higher ranking.

C. Site Condition

1. Existing Structures. The presence of existing structures on the site increases the construction costs by having to remove the structures and dispose of materials. Sites without structures are considered desirable. Sites with no structures will receive a higher ranking.
2. Elevation and Topography. A low lying site facilitates gravity flow of wastewater from the service area and minimizes the number of pumping stations in the collection system. However, sites that are low lying may require additional flood protection or stormwater retention and site development costs need to be considered. Land areas with steep natural slopes require more excavation and retaining walls. Sites with more than 20 feet of elevation change will receive a lower ranking. Also see floodplain subcriteria.
3. Usable Area and Shape. Major streams, environmental areas, protected wetlands, floodways, and railway or highway corridors are considered unusable. Shape of the property is considered important for efficient layout of the facility. A rectangular shaped property is desirable. Long narrow shapes where useable area is divided on the site is considered undesirable. Sites with less than 15 acres of useable land for HB/PFT Sites and Sites with less than 50 acres of usable land for Wastewater Treatment Facilities will receive a lower ranking.
4. Opportunity for Co-Development. Sites that have potential to combine the facility with other projects such as wetlands development, recreational facilities, industrial facilities, or park improvement projects will receive a higher ranking.
5. Geotechnical. Soil types, allowable bearing capacity, and depth of rock may impact the foundation types for structures, the types of material used during construction, the hydraulic profile of the plant, or types of construction methods used. Sites with shallow bedrock depth requiring rock removal, low bearing capacity soils, fine grained alluvial soils, or corrosive soils will be receive a lower ranking.
6. Groundwater and Groundwater Wells. High-groundwater conditions increase construction costs for dewatering. Waterproofing requirements for basements, tunnels, and dry wells are more substantial. Permanent groundwater pumping systems may be needed. The lower the groundwater table the higher the site ranking.
7. Site Development Costs. Additional costs may be required to develop a site based on site conditions identified in other subcriteria. The lower the additional site development costs, the higher the ranking.

D. Engineering Functionality

1. Service Area Acres. This subcriteria relates to the potential tributary wastewater service area that can flow from the upper areas to the watershed to the site by gravity in the trunk sewer system. The larger the amount of service area acres the higher the ranking. It is recognized a sewer siphon or pumping station will be needed to convey flow from one side of Salt Creek to the other side.
2. Minimization of Pumping. A site that minimizes pumping stations and forcemains required to bring all service area wastewater to the site is desirable. Consideration will be given to sites that can utilize a siphon versus pumping from either side of Salt Creek. Sites that maximize the number of acres without pumping will receive a higher ranking.
3. Maximizes Theresa Street WWTF. Site locations that maximize the use of the ultimate capacity of the Theresa Street WWTF will receive a higher ranking. Consideration will be given to the optimum balance of treatment capacity between the Theresa Street WWTF and a new Southwest WWTF.
4. Maximizes Salt Valley Sewers. The amount of peak flow that be accommodated by the facility will be compared to the flow amount that cannot be handled by the Salt Valley Trunk Sewer. Facility sites that can handle the most amount of peak flow while maximizing the use of the Salt Valley Trunk Sewer System will receive a higher ranking.
5. NPDES Permitting. Compare anticipated NPDES discharge limitations received from the Nebraska Department of Environmental Quality. Locations where future wastewater discharging will be acceptable to the State and where the permit limits are more favorable will receive a higher ranking.
6. Dual-Use Wastewater Facility Capability. Sites that can function as both a holding basin/peak flow treatment site and a wastewater treatment facility site will receive a higher ranking. Dual-use capability allows for phased implementation.

E. Environmental Conditions

1. Proximity to Wilderness Park. Wilderness Park is considered a highly valuable environmental community asset. The greater the buffer between Wilderness Park and the sites, the higher the ranking.
2. Floodplain. Sites will be evaluated by the amount of land located in the floodplain. The lower the number of acres in the floodplain, the higher the ranking.
3. Permitting. The variations in permitting for the facility based on the location along Salt Creek will be determined. Corps of Engineers, Stormwater NPDES, Levee Districts, and other environmental permit requirements will be assessed and ranked for each site.

4. Site Contamination. The extent of soil or groundwater contamination on each site will be assessed based on available historical data. Sites with no observed site contamination will receive a higher ranking.
5. Wetlands. Sites with no Federal or State designated wetlands will receive a higher ranking. Sites with saline wetlands will receive a low ranking.
6. Archeological/Historical Evidence. Sites without any known archeological or historical resources will receive a higher ranking.
7. Rare or Endangered Species. Information documenting the presence of species listed on the Endangered Species Act and candidate species will be reviewed. Sites without the presence of endangered species will receive a higher ranking.
8. Geomorphology of Salt Creek. The effect of an effluent discharge on the fluvial geomorphology of Sal Creek in Wilderness Park will be considered. Discharges at the northern end of Wilderness Park will receive a higher ranking than at the southern end, due to lower impacts on Wilderness Park.

E. Public Acceptance

1. Odor Control. The potential for odors to impact the surrounding area will be reviewed. Sites with low anticipated impacts, based on greater buffer area, will receive a higher ranking. It is recognized that state-of-the-art odor control systems would be provided for all sites.
2. Noise Control. The transmission of noise beyond the plant boundaries to residential neighborhoods will be reviewed. Sites with low anticipated impacts, based on greater distance to residential areas, will receive a higher ranking.
3. Displacement of Housing and Businesses. The number and type of displacement of residential housing and businesses will be reviewed. Sites that do not require displacement of housing or businesses are preferred and will receive a higher ranking.
4. Visual Impacts. A highly visible location is more difficult to screen from public view. The opportunity to improve a view and blend into the surroundings will also be reviewed. Sites that are not anticipated to cause adverse visual impacts to the public will receive a higher ranking.
5. Environmental Impacts. Public acceptance of environmental impacts will be considered. The environmental conditions subcriteria will be considered from a public acceptance perspective and sites will be ranked accordingly.
6. Neighborhood Impacts. Public acceptance of adjacent neighborhood impacts will be considered. Sites with greater distance to established neighborhood groups will receive a higher ranking.